

BIGMUN 2024

ECOSOC 4: Commission on Science and Technology for Development (CSTD)

# Research Report

---

Topic 2: Creating a framework to manage the effects of technological advances on trade.



By Enora Lagarde & Nivranshu Saha

## Outline

Introduction .....	2
Definition of Key Terms .....	2
Background Information .....	3
Major Countries and Organizations Involved .....	5
Relevant UN Resolutions .....	6
Previous Attempts to Solve the Issue .....	7
Possible Solutions .....	8
Bibliography .....	10

## Introduction

In today's globalized world, innovations and technical progress are fundamental factors that affect international trade. From 1980 to 2022, the volume of world trade has increased 7.8 times.<sup>1</sup> This increasing openness is due to both technological advances and the modification of customs rules. Innovations such as containers and container doors or the Internet have definitely changed the way to trade on a global scale, consequently pushing nations to constantly adapt to this ever-changing globalized world. It is consequently important here to understand that it is not desirable to leave one or more nations behind.

“Since 2005, exports of digitally delivered services have more than tripled, far outpacing trade in goods and other services. This trend accelerated during the pandemic — leaping by 30% in 2021 compared to 2019. In 2022, the value of digitally delivered services reached \$3.82 trillion, or 12% of total global trade.” WTO (Oct. 2023)

## Definition of Key Terms

**Technological advances:** A change in the way a product or service is produced or delivered that reduces the resource input requirements for production or delivery.<sup>2</sup>

**AI (Artificial Intelligence):** The use or study of computer systems or machines that have some of the qualities that the human brain has, such as the ability to interpret and produce language

---

<sup>1</sup> INSEE, *The Essential For Globalization* September 4th 2023  
- <https://www.insee.fr/fr/statistiques/3633242#:~:text=Observer%2Dt%2Don%20un%20accroissement,%C3%A9t%C3%A9%20multipli%C3%A9%20par%204%2C1>

<sup>2</sup> Igi Global *What Are Technological Advances* (2016) [https://www.igi-global.com/dictionary/technological\\_advance/53595](https://www.igi-global.com/dictionary/technological_advance/53595)

in a way that seems human, recognize, or create images, solve problems, and learn from data supplied to them<sup>3</sup>.

**Blockchain:** A system used to make a digital record of all the occasions a cryptocurrency (= a digital currency such as bitcoin) is bought or sold, and that is constantly growing as more blocks are added: Blockchains are appearing in a variety of commercial applications today. The first prominent use of blockchain was bitcoin.<sup>4</sup>

**Free Trade:** The economic doctrine that advocates the removal of all barriers to trade in goods and services, on a global scale.

**Multilateralism:** The process of organizing relations between groups of three or more states. Beyond that basic quantitative aspect, multilateralism is generally considered to comprise certain qualitative elements or principles that shape the character of the arrangement or institution. Those principles are an indivisibility of interests among participants, a commitment to diffuse reciprocity, and a system of dispute settlement intended to enforce a particular mode of behavior<sup>5</sup>.

**Stock Market:** Relies on stock exchanges, today a dematerialized place where exchanges of financial products take place such as shares, capital shares of companies issued by the latter to raise funds. Investors can thus acquire and own these fractions of capital, then trade and resell them.<sup>6</sup>

## Background Information

It is estimated that 5 in 6 people live in developing economies, which accounts for most of the population growth. Moreover, about 70% of international trade today induces global value chains, which involves international trade due to comparative advantages<sup>7</sup>. This underlines the importance of creating a frame concerning growing economies based on multilateralism and global trade. Today, technological advancements have become integral to the fabric of global trade, reshaping traditional practices and introducing unprecedented opportunities and challenges. The rapid evolution of technologies such as artificial intelligence (AI), blockchain and automation have transformed the landscape of international commerce.

---

<sup>3</sup> Cambridge Dictionary Artificial intelligence <https://dictionary.cambridge.org/dictionary/english/artificial-intelligence>

<sup>4</sup> Cambridge Dictionary Blockchain (<https://dictionary.cambridge.org/dictionary/english/blockchain> ; Britannica, definition of multilateralism , <https://www.britannica.com/topic/multilateralism> Britannica, [multilateralism](https://www.britannica.com/topic/multilateralism)

<sup>5</sup> Britannica, definition of multilateralism , <https://www.britannica.com/topic/multilateralism> Britannica, [multilateralism](https://www.britannica.com/topic/multilateralism)

<sup>6</sup> Investopedia, *What Is the Stock Market, What Does It Do, and How Does It Work?* October 27th 2023 <https://www.investopedia.com/terms/s/stockmarket.asp>

<sup>7</sup> OECD, *Global value Chains and Trade* <https://www.oecd.org/trade/topics/global-value-chains-and-trade/> <sup>8</sup> UNCTAD <https://unctad.org/topic/commission-on-science-and-technology-for-development>

AI, with its capacity for data analysis and automation, is streamlining trade processes and decision making. Blockchain technology is enhancing transparency and security in transactions, while automation is revolutionizing production and supply chain.

Currently, AI is seen as the most important technology for achieving short terms ambitions, but the lack of cooperation is the main hurdle for tech function's transformation progress. Market concentrations are increasing, but fewer countries handle a growing share of manufacturing exports. Digitally deliverable services grew significantly during the pandemic, but developing economies' share remains at only 24%<sup>8</sup>. Indeed, it takes time for an economy to incorporate and make effective use of new technologies, particularly complex ones with economy-wide impacts such as AI.

AI will also affect the type and quality of economic growth, with international trade implications. For instance, AI is likely to accelerate the transition towards services economies. This is a corollary to concerns about the impact of AI and jobs, as AI is likely to expand automation and speed up job losses for low-skill, blue-collar workers in manufacturing fields.

For small businesses in particular, digital platforms have provided unprecedented opportunity to go global.

Concurrently, blockchain has revolutionized the way we see and do things on the internet. Because it has the potential to significantly contribute to create a framework to manage the effects of technological advances on trade, many companies are switching to blockchain to increase transparency and immutability.

In trade, this transparency can be used to track the movement of goods along the supply chain, providing a verifiable record of each transaction and enabling the creation of transparent records of transactions.

It contributes to setting and preserving global trade norms through a shared and stable ledger accessible to relevant stakeholders. This assists in upholding compliance with international regulations, standards, and procedures. It also led to smoother cross-border trade.

By leveraging blockchain technology in trade, governments, businesses, and other stakeholders can create a more efficient, transparent, and secure framework for managing the effects of technological advancements. However, widespread adoption and standardization are essential for reaping the full benefits of blockchain in global trade and it is not yet a reality.

The paradox is here found between a globalized world in which countries and nations are constantly exchanging and the contradictory fact that developing countries might be left behind of the supposed international multilateralism.

---

<sup>8</sup> UNCTAD <https://unctad.org/topic/commission-on-science-and-technology-for-development>

Technological advances in trade can have both positive and negative consequences. On the positive side, they can enhance efficiency, reduce costs, and facilitate global communication, leading to increased trade volumes. However, they may also contribute to job displacement as automation and artificial intelligence become more prevalent. Additionally, there can be concerns about data security and privacy in the increasingly digitalized trade environment. Striking a balance between harnessing technological benefits and addressing potential drawbacks is crucial for navigating the evolving landscape of global trade. As technological advances are useful in the creation of improving tools, the protection of certain jobs might be an issue to consider.

## Major Countries and Organizations Involved

### WTO

The World Trade Organization operates the global system of trade rules and helps developing countries build their trade capacity. It also provides a forum for its members to negotiate trade agreements and to resolve the trade problems they face with each other.<sup>9</sup>

### World Bank Group

An international organization that has the vision to create a world free of poverty on a livable planet and the mission to end extreme poverty and boost prosperity. The WBG is composed of five institutions, in the topic of science and development, the IDA, International Development Association, might be the most pertinent one in order to find solutions to the issue.<sup>10</sup>

### United Nations Conference on Trade and Development (UNCTAD)

The UNCTAD focuses on trade and development issues, making it a central platform for discussions on harnessing technology for inclusive and sustainable trade.<sup>11</sup>

### United States of America

As a global technology leader, the USA plays a significant role in shaping policies and practices at the nexus of technology and trade. The United States are committed to joint leadership in promoting and upholding an international rules-based order grounded in shared values.<sup>12</sup>

### China

China is a major player in both technological innovation and international trade. China's policies and advancements have a substantial impact on the global landscape. Science and

---

<sup>9</sup> World Trade Organization, WTO / <https://www.wto.org>

<sup>10</sup> The world Bank, IDA <https://www.worldbank.org/en/who-we-are>

<sup>11</sup> The CTSD within the UNCTAD, website <https://unctad.org/meeting/commission-science-and-technology-development-2023-2024-inter-sessional-panel>

<sup>12</sup> EU/US Trade and Technology Council, MAY 31 2023 <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/31/u-s-eu-joint-statement-of-the-trade-and-technology-council-2/>

technology are considered very highly by the Chinese government: “*Scientific and technological innovation has become the main battlefield of the international strategic game,*” said Xi Jinping in a speech on May 28, 2021.<sup>13</sup>

## Relevant UN Resolutions

Resolution adopted by the Economic and Social Council on 7 June 2023  
E/RES/2023/4

-« [...] *To encourage and support the science, technology and innovation efforts leading to the development of infrastructure and policies that support the global expansion of information and communications technology infrastructure, products and services, including broadband Internet access, to all people, particularly women, girls and youth, and persons with special needs and from remote and rural communities, catalyzing multi-stakeholder efforts to accelerate the growth in the number of new Internet users and endeavoring to improve the affordability of such products and services;* »

-« *To implement initiatives and programs that encourage and facilitate sustainable investment and participation in the digital economy;* »

-« *To increase support for research and development activities on rapid technological change and ensure the coherence of science, technology and innovation policies and strategies on rapid technological change with the broader national development agenda;* »<sup>14</sup>

## United Nations Charter Article 55

The United Nations shall promote:

- a) higher standards of living, full employment, and conditions of economic and social progress and development;
- b) solutions of international economic, social, health, and related problems; and international cultural and educational cooperation;

---

<sup>13</sup> Rhodium Group, *Spread Thin: China’s Science and Technology Spending in an Economic Slowdown* December 15 2023 <https://rhg.com/research/spread-thin-chinas-science-and-technology-spending-in-an-economic-slowdown>

<sup>14</sup> E/RES/2023/4 UNCTAD, CSTD Distr.: General 19 June 2023 [https://unctad.org/system/files/official\\_document/ecosoc\\_res\\_2023d4\\_en.pdf](https://unctad.org/system/files/official_document/ecosoc_res_2023d4_en.pdf)

The organization shall, where appropriate, initiate negotiations among the states concerned for the creation of any new specialized agencies required for the accomplishment of the purposes set forth in Article 55.<sup>15</sup>

#### Article 59

The organization shall, where appropriate, initiate negotiations among the states concerned for the creation of any new specialized agencies required for the accomplishment of the purposes set forth in Article 55.<sup>16</sup>

### Previous Attempts to Solve the Issue

Because the area of action is very complex, including a large number of nations involved in international trade, it is then interesting to divide the previous means of action implemented on several scales.

#### UN attempts to solve the issue:

In 2015, the General Assembly in its resolution 70/125 requested the Chair of the Commission for Science and Technology for Development, through the Economic and Social Council, to establish a working group to develop recommendations on how to further implement enhanced cooperation as envisioned in the Tunis Agenda, with the full involvement of all relevant stakeholders. The CSTD Working Group on Enhanced Cooperation (WGEC) held five meetings between September 2016 and January 2018. The complexity and political sensitivity of the topic did not allow the working group to agree on a set of recommendations.<sup>17</sup>

#### Other organizations attempt to solve the issue:

The WTO that has gained considerable attention lately is the ongoing plurilateral joint initiative on e-commerce. Eighty-nine WTO Members, including many developing countries and a few LDCs, participate in this effort to develop baseline rules governing the global digital economy. Participants are seeking to establish common disciplines to facilitate remote transactions and strengthen trust in digital markets. The disciplines discussed address both trade facilitative issues, such as e-signatures, on-line consumer protection, and paperless trade, as well as trade restrictive measures in the digital sphere, such as restrictions on cross-border data flows and data localization. Participants have made substantive progress and are aiming to substantially conclude these negotiations by the end of the year.

One hundred and ten of the WTO's 164 members concluded negotiations on all the substantive provisions of an agreement on Investment Facilitation for Development on July 6, 2023. This

---

<sup>15</sup> United Nations Charter, Chapter IX: International economic and social cooperation, article 55 <https://www.un.org/en/about-us/un-charter/chapter-9>

<sup>16</sup> United Nations Charter, Chapter IX: International economic and social cooperation, article 55 <https://www.un.org/en/about-us/un-charter/chapter-9>

<sup>17</sup> WTO, *Joint Initiative on E-commerce* [https://www.wto.org/english/tratop\\_e/ecom\\_e/joint\\_statement\\_e.htm](https://www.wto.org/english/tratop_e/ecom_e/joint_statement_e.htm)

deal would help developing Members in particular as they improve their investment climate and attract, retain, and expand foreign direct investment.

The agreement will make governments' investment-related measures more transparent and predictable by cutting red tape in investment-related administrative procedures and by ensuring developing countries receive the technical and capacity support they need to implement the new rules. The goal is to promote sustainable investment: the agreement notably contains anti-corruption measures and provisions to encourage responsible business conduct. Participants are now thinking how to incorporate the new agreement into the WTO architecture and are hoping to make headway in time for our Ministerial Conference in February. In this context, they are reaching out to all WTO Members, including non-participating Members.<sup>18</sup>

### Restricted area, local and unilateralist ways to solve the issue:

Here, USMCA makes progress, including a recognition by the Parties of the importance of access to government information for economic and social development, and to the extent possible making government data accessible in machine-readable and open format. The agreement settled in 2020 includes chapters highlights such as new chapters covering Digital Trade, Anticorruption, and Good Regulatory Practices, as well as a chapter devoted to ensuring that Small and Medium Sized Enterprises benefit from the Agreement.<sup>19</sup>

### EU attempts to solve the issues:

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)<sup>20</sup>

It impacts how company trade and manage data across borders. "Technology has transformed both the economy and social life, and should further facilitate the free flow of personal data within the Union and the transfer to third countries and international organizations, while ensuring a high level of the protection of personal data."

### Possible Solutions

Create, consolidate, and foster collaboration among nations to establish common standards and regulations for technology in trade, ensuing consistency.

Creation of international guidelines: Develop international guidelines under UN auspices that set ethical standards and best practices for the integration of technology in trade, ensuring inclusive and responsible development.

---

<sup>18</sup> WTO, *Investment facilitation for development*  
[https://www.wto.org/english/tratop\\_e/invfac\\_public\\_e/invfac\\_e.htm](https://www.wto.org/english/tratop_e/invfac_public_e/invfac_e.htm)

<sup>19</sup> Office of the United States Trade Representative, 2020 <https://ustr.gov/tradeagreements/free-trade-agreements/united-states-mexico-canada-agreement>

<sup>20</sup> Official journal of the European Union 119/1 <https://eur-lex.europa.eu/eli/reg/2016/679/oj>



Capacity Building fund: to support capacity-building initiatives in developing nation, focusing on enhancing their technological capabilities for the evolving trade landscape.

These Possible Solutions emphasize international cooperation; ethical considerations, capacity building and strategic frameworks to effectively address the challenges posed by technological advances in the context of global trade.

## Bibliography

(1) Brookings, « The Impact Of Artificial Intelligence On international Trade » December 13th 2018 <https://www.brookings.edu/articles/the-impact-of-artificial-intelligence-on-international-trade/>

WTO, « Digital technologies and trade » :  
[https://www.wto.org/english/tratop\\_e/dtt\\_e/dtt\\_e.htm](https://www.wto.org/english/tratop_e/dtt_e/dtt_e.htm)

IBM , « Blockchain and artificial intelligence (AI) », « The convergence of blockchain and AI brings new value to business » : <https://www.ibm.com/topics/blockchain-ai>

WTO, « DDG Ellard highlights impact of technological developments on global trade speech » : [https://www.wto.org/english/news\\_e/news23\\_e/ddgae\\_06oct23\\_e.htm](https://www.wto.org/english/news_e/news23_e/ddgae_06oct23_e.htm)

Alan Wm. Wolff (PIIE), « WTO members find a new (and successful) approach to negotiations » : <https://www.piie.com/blogs/realtime-economics/wto-members-find-new-and-successful-approach-negotiations>

Jim Chen, Oct 2023,(Investopedia), »What Is the Stock Market, What Does It Do, and How Does It Work? » <https://www.investopedia.com/terms/s/stockmarket.asp>

OECD, « Global value chains and trade », « The trade policy implications of global value chains » : <https://www.oecd.org/trade/topics/global-value-chains-and-trade/>

UNCTAD, « Commission on Science and Technology for Development, 2023-2024 Inter sessional Panel » : <https://unctad.org/meeting/commission-science-and-technology-development-2023-2024-inter-sessional-panel>

UN, « The United Nations System » :  
[https://www.un.org/en/pdfs/un\\_system\\_chart.pdf](https://www.un.org/en/pdfs/un_system_chart.pdf)

• The World Bank Group : <https://www.worldbank.org/en/who-we-are>

UN, former useful resolutions : <https://www.un.org/en/site-search?query=CSTD>

UN, 201.5 Part 3: Economic and social questions, Chapter 1: Development policy and international economic cooperation, Page 404 :  
<https://www.un.org/en/yearbook/2015/418>

U.S.-EU Joint Statement of the Trade and Technology Council May 31 2023: <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/31/u-s-eu-joint-statement-of-the-trade-and-technology-council-2/>